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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/588,840 | 09/18/2007 | T. Gordon McMahon | 003.2002 | 1056 |
| 22204 | 7590 | 11/09/2009 | EXAMINER | |
| NIXON PEABODY, LLP 401 9TH STREET, NW SUITE 900 WASHINGTON, DC 20004-2128 | | | SAYALA, CHHAYA D | |
| | | | ART UNIT | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/588,840 | Applicant(s) MCMAHON ET AL. | |
| | Examiner C. SAYALA | Art Unit 1794 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-25 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 11-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

35 U.S.C. 101 states as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

It is not clear under what category “system” falls under. Is this invention a process, machine, manufacture or a composition? The specification has been thoroughly reviewed and provides no aid. The dictionary meaning of “system” is as follows:

system Definition

sys·tem (sis'təm)

noun

1. a set or arrangement of things so related or connected as to form a unity or organic whole a solar system, school system, system of highways
2. a set of facts, principles, rules, etc. classified or arranged in a regular, orderly form so as to show a logical plan linking the various parts
3. a method or plan of classification or arrangement
- 4.

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- a. an established way of doing something; method; procedure
 - b. orderliness or methodical planning in one's way of proceeding
- 5.
- a. the body considered as a functioning organism
 - b. a number of bodily organs acting together to perform one of the main bodily functions the digestive system
6. a related series of natural objects or elements, as cave passages, rivers, etc.
7. CHEM. a group of substances in or approaching equilibrium: a system with two components, phases, or variables is called binary, one with three, ternary, etc.

Accordingly, the claims are neither a product or process or manufacture or composition as recited. For examination purposes, these claims are being treated as product claims since the claims are devoid of any active process steps to relate 'system' to a method of making or using.

Applicant claims a microbially-enhanced fertilizer, i.e. a fertilizer that has been enhanced by microorganisms. Therefore, it is not clear what is meant by a "non-microbially enhanced fertilizer". If the fertilizer is not enhanced by microbes, (non-microbially) then how is it enhanced, if it is still being called "non-microbially enhanced"?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 11-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Mehta (US Patent 6228806).

Mehta discloses both elements of applicant's claims, i.e. the inorganic fertilizer comprising nitrogen, phosphorous and potassium as well as microorganisms. Specifically, Mehta discloses A. an effective quantity of inorganic fertilizer and B. and a quantity of beneficial microorganisms sufficient to further enhance plant growth when the fertilizer is applied. See abstract. At col. 1, lines 56-59, the patent discloses the ratio of N:P:K that are to be used and they coincide with those claimed herein at claims 11, 16 and 20. See col. 4, lines 5-8. Additionally, Mehta discloses component B as being from 1×10^5 to 1000 million microorganisms per gram of fertilizer composition. The microorganisms are selected from bacteria, viruses and fungi. See col. 2, lines 60-61. By virtue of these facts, the composition claimed has been met. Applicant's recitation of using a microbially enhanced fertilizer in an amount less 25% than a non-microbially enhanced fertilizer (not part of the claimed combination), is a characteristic or property that is described or realized, and by using Mehta's composition which is the same composition as claimed herein, the same property or characteristic of the composition would have been inherently obtained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to

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a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mehta in view of Xu et al. (Editors, "Nature Farming and Microbial Applications", Publishers: Food Products Press, page 338, 2000) and JP 10248386.

Mehta is as described in the above paragraph. The patent does not disclose that the composition shows that the microbially enhanced fertilizer is used in amounts 25% less than a non-microbially enhanced fertilizer. Although neither the claim nor the specification describes how the non-microbially enhanced fertilizer was enhanced, and while Mehta does disclose that prior to applying the patented composition the soil is analyzed to determine its nutritional requirements and the fertilizer composition to satisfy the nutritional requirements is then formulated, Xu et al. teach that "microbial fertilizers take the place of fertilizers because of their significant effects and that microbial fertilizers can increase crop yields, improve biodiversity and soil fertility, *reduce the need for chemical fertilizers*, recycle organic wastes and, consequently, abate environmental pollution". Based on these benefits, it would have been obvious to use the composition described by Mehta and reasonably expect that such use would reduce the need for chemical fertilizers as described by Xu et al. The JP patent also discloses that using microbes results in the amount of fertilizers (agricultural chemicals) "is remarkably reduced". Therefore, when prior art already established that using a microbially enhanced fertilizer would either reduce agricultural chemical or fertilizer use or even completely eliminate such use, the claims' recitation of an amount of at least 25% less of a non-microbially enhanced fertilizer is not unobvious, given that analyzing

the soil for its nutrients and formulating a composition for fertilizing it based on such analysis was also disclosed by Mehta.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Sayala whose telephone number is (571) 272-1405. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/C. SAYALA/
Primary Examiner, Art Unit 1794**